Docket No. TRANSMITTAL OF APPEAL BRIEF (Large Entity) ITL.0618US In Re Application Of: Lawrence A. Booth, Jr. and Robert C. Sundahl Group Art Unit Filing Date Examiner Serial No. 09/918,404 July 30, 2001 P. Macchiarolo 2875 Sealing Organic Light Emitting Device Displays Invention: TO THE COMMISSIONER FOR PATENTS: Transmitted herewith in triplicate is the Appeal Brief in this application, with respect to the Notice of Appeal filed on July 14, 2003. The fee for filing this Appeal Brief is: \$320.00 A check in the amount of the fee is enclosed. The Director has already been authorized to charge fees in this application to a Deposit Account. \boxtimes The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 20-1504 August 26, 2003 Dated: Timothy N. Trop, Reg. No. 28,994 Trop, Pruner & Hu, P.C. 8554 Katy Freeway, Suite 100 I certify that this document and fee is being deposited Houston, Texas 77024 08-26-03 with the U.S. Postal Service as (713) 468-8880 first class mail under 37 C.F.R. 1.8 and is addressed to the (713) 468-8883 (fax) Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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SITED STATES PATENT AND TRADEMARK OFFICE

In re Applicant:

Lawrence A. Booth, Jr. et al.

Art Unit:

2875

Serial No.:

09/918,404

Examiner:

P. Macchiarolo

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For:

Sealing Organic Light

Emitting Device Displays

Atty Docket: ITL.0618US

P11949

Mail Stop Appeal Brief-Patents Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

APPEAL BRIEF

Sir:

Applicants respectfully appeal from the final rejection mailed April 16, 2003.

I. **REAL PARTY IN INTEREST**

The real party in interest is the assignee Intel Corporation.

RELATED APPEALS AND INTERFERENCES II.

None.

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Date of Deposit: <u>August 26, 2003</u>
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Cynthia L. Hayden

III. STATUS OF THE CLAIMS

Claims 1, 3-5, 11, 12, 14, and 15 are rejected. Each rejection is appealed.

IV. STATUS OF AMENDMENTS

All amendments have been entered.

V. SUMMARY OF THE INVENTION

Referring to Figure 1, an organic light emitting device (OLED) display may include a back plate 16 secured to a front plate 12. In one embodiment, the organic light emitting material is secured to the interior side of a transparent front plate 12. A filler material 14 may be applied between the front and back plates 12 and 16. The material 14 may include a standard epoxy utilized for device assembly back fill processes in one embodiment. A desiccant compound, such as silica or zeolite material, may be mixed into the filler material 14.

The back plate 16 may be a glass or ceramic layer that is impervious to the ambient including moisture. An adequate offset of the front panel 12 from the edges provides the necessary diffusion distance to achieve an acceptable lifetime. See specification at page 2, line 19 through page 3, line 8.

Referring to Figure 2, in accordance with one embodiment, each of the front plates 12 may be a module including a transparent substrate 20 surface mounted by surface mount material 28 to a back plate 22. In one embodiment, the back plate 22 may be a ceramic plate. The back plate 22 may receive integrated circuit driver devices and may transmit the signals from the driver devices (not shown) through the solder balls 28 to row and column electrodes (not shown) deposited over the substrate 20. Organic light emitting material may be deposited on the

substrate 20 on the rear side thereof as indicated at 26. Light emitted by the light emitting material passes outwardly through the front plate 20. The region remaining between the front plate 20 and the rear plate 22 may be filled with the material 14.

In an implementation for array displays, such offsets may not be acceptable. The OLED structure may extend to the end of the display module array displays. Additional protection can be achieved through the use of the filler material 14 to fill the seams between neighboring modules of array displays.

As shown in Figure 3, a plurality of modules 8 may be abutted side-to-side, each module 8 abutting the lateral extension of the filler material 14 and sealing the joints within any given array display 10 and between adjacent modules 8.

The desiccant in the filler material 14 traps moisture before it can attack the moisture sensitive organic light emitting materials in the OLED display 10. In addition, the moisture trapping capability is provided between the layers 20 and 22 of each module 8. The desiccant or getter material absorbs moisture and other gases as they diffuse in from the edge of the sandwiched display 10.

Thus, each module 8 may be surrounded by a barrier of desiccant filler material 14 and the front and back plates 12 and 16 may be similarly coated. See specification at page 3, line 9 through page 4, line 18.

VI. ISSUES

A. Is Claim 1 Obvious Over Inohara and Matsuura?

VII. GROUPING OF THE CLAIMS

All of the claims may be grouped with claim 1.

VIII. ARGUMENT

A. Is Claim 1 Obvious Over Inohara and Matsuura?

Claim 1 patentably distinguishes over the art of record because none of the art of record teaches putting the filler material with the desiccant, not only between the front and back panels, but also between adjacent modules. There is no teaching of any modules in either of the cited references.

The modules clearly do not refer to the region between the front and back plate, but rather to the region between modules each having front and back plates.

The argument that claim 1 is obvious per se simply fails to make out a *prima facie* rejection. Such a rejection requires a showing of the elements in the prior art or a rationale from within one of the references to make the claimed modification. Simply teaching the incorporation of a material within the module to act as a desiccant does not teach providing it between adjacent modules. One skilled in the art may reasonably expect that the material within the module may be sufficient, but the inventors of the present application have determined that additional benefits can be obtained from providing the material between adjacent modules.

The requirement for a showing of criticality set forth in the advisory action is non-statutory, begs the obviousness inquiry, and unsuccessfully attempts to obscure the failure to set forth a *prima facie* rejection.

Therefore, the rejection of claim 1 should be reversed.

IX. CONCLUSION

Applicants respectfully request that each of the final rejections be reversed and that the claims subject to this Appeal be allowed to issue.

Respectfully submitted,

Date: August 26, 2003

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APPENDIX OF CLAIMS

The claims on appeal are:

- 1. An organic light emitting display comprising:
 - a front plate having an organic light emitting material formed on one side thereof;
 - a back plate secured over said side of said front plate;
- a filler material including a desiccant mixed into said filler material to seal the region between said front and back plates; and

a plurality of modules, each including a front plate and back plate, said filler material provided between said modules.

- 3. The display of claim 1 wherein said desiccant is a silica.
- 4. The display of claim 1 wherein said desiccant is zeolite.
- 5. The display of claim 1 wherein said filler material includes epoxy.
- 11. A method comprising:

forming a front plate having an organic light emitting material deposited thereon;

covering said organic light emitting material with a back plate;

sealing the region between said front and back plates with a filler material

including a desiceant mixed into said filler material;

combining a plurality of light emitting device modules to form an array; and

filling the regions between adjacent modules with filler material including a desiccant mixed into said filler material.

- 12. The method of claim 11 including mixing a filler material into an epoxy.
- 14. The method of claim 11 including mixing zeolite into epoxy to form said filler material.
- 15. The method of claim 11 including mixing silica into epoxy to form said filler material.